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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,850	01/13/2005	Toru Nonami	264633US0PCT	8584
22850	7590	06/05/2007	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SPEER, TIMOTHY M	
ART UNIT		PAPER NUMBER		
1775				
NOTIFICATION DATE		DELIVERY MODE		
06/05/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/519,850	NONAMI, TORU	
	Examiner Timothy M. Speer	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 February 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-6 and 12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 13 January 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>01/13/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I in the reply filed on 02/20/07 is acknowledged. The traversal is on the ground(s) that the Examiner has failed to set forth the "special technical feature" recited in the present claims. This is not found persuasive because the Examiner indicated that the claimed limitations do not constitute a special technical feature, since the claimed invention was known in the art, as evidenced by EP 963789 A2. Specifically, the cited reference discloses a substrate, e.g., titania particles, coated with calcium phosphate, as recited in the Group I claims, as well as methods of making such particles. Since such particles were known in the art, the claims lack a "special technical feature."

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "the photocatalytic particles" at lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Accordingly, the scope of this cannot be ascertained and the claim is considered to be indefinite.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. **Claims 1-6 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by**

**Taodo (EP 0 963 789 A2).**

6. As an initial matter, the Examiner notes that the subject specification discloses that the substrate recited in the present claims may be titania particles (see page 8, lines 11-17, for instance).

7. Taodo teaches titania particles having a calcium phosphate coating formed thereon (abstract). The coating is formed in the presence of water and, accordingly, will be "hydraulic" as presently claimed (paragraph [0046], for instance). Regarding claim 2, titania is a photocatalyst. With respect to claim 3, since the coatings of Taodo are made of the same materials as disclosed in the subject specification and are made by substantially similar methods, it is the Examiner's position that the resultant, coated particles will exhibit the characteristics recited in claim 3. Regarding claim 6, Taodo teaches that the calcium phosphate is preferably octacalcium phosphate (paragraph [0041]).

8. Claims 4 and 5 do not limit the coating material to calcium silicates, but merely identify types of silicate which may be employed. Since these materials need not be present in the coating, i.e., a silicate cement is not positively recited as the coating material, it is the Examiner's position the claims 4 and 5 are anticipated by Taodo, since they are met by the disclosure of a calcium phosphate coating.

9. Finally, with respect to claim 12, Taodo teaches that the particles disclosed therein may be used to form coatings on substrates (paragraph [0076]). For instance, Taodo teaches that films containing the particles may be formed on aluminum plates, i.e., a "structural member"

(paragraph [0090]). The resultant coated member would exhibit the characteristics recited in claim 12, since the coating comprises the same materials as presently claimed.

**10. Claims 1-5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Cassar (USPN 6,409,821).**

11. Cassar teaches a hydraulic composite material comprising titania particles in a calcium silicate cement (see abstract, col. 3, lines 14-19, col. 4, lines 5-8, and col. 9, lines 20-55).

Regarding claim 2, since titania particles are employed, the "substrate" is a photocatalyst.

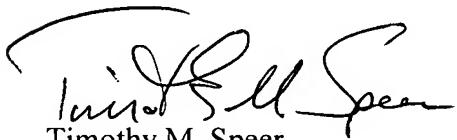
Regarding claim 3, since the titania particles are contacted with the calcium silicate cement, the claimed characteristics will be present. With respect to claims 4 and 5, Cassar teaches that the cement may comprise calcium silicate as a main component and moreover, that alite ( $3\text{CaO}\cdot\text{SiO}_2$ ) and belite ( $2\text{CaO}\cdot\text{SiO}_2$ ) may be employed (col. 3, lines 14-19 and col. 9, lines 20-55). With respect to claim 12, Cassar discloses that the compositions disclosed therein may be formed on supports, which constitute "structural members," as presently claimed (col. 7, lines 51-52).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Speer whose telephone number is 571-272-8385. The examiner can normally be reached on M-Th, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Timothy M. Speer